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Book reviews

Forensic Neuropathology, Jan E. Leestma (lead author), 2nd ed. CRC Press, Taylor & Francis Group (2009), ISBN: 978-0-8493-9167-5

The second edition of Forensic Neuropathology has been extensively revised and updated since its first appearance nearly 30 years ago.

The book commences by dealing with problems of expert evidence and how they have been affected by the Daubert case. In addition, the Court system in the United States of America is outlined in considerable detail. The first two chapters are mainly applicable to the US jurisdiction, nevertheless, many of the principles are "transportable" to other common law systems. British readers will appreciate the similarities between Daubert and the Ikarian Reefer case.

The main canon of the book is authoritative and detailed. References from peer-reviewed literature abound and all illustrations are in colour.

Chapter 3, which deals with forensic aspects of adult general neuropathology provides a brilliant synopsis of neuropathology and if you can only read one chapter, this would be the one to study.

I found that the chapters that deal with head trauma and cerebrovascular disease were particularly well written and relevant to my own practice.

As a practicing neurosurgeon with a medicolegal interest and Coroner, I found the book very useful and would recommend it to pathologists, Coroners, as well as to clinicians called to give expert opinions in both civil and criminal courts.

Conflict of interest

None declared.

Paul V. Marks*
Consultant Neurosurgeon,
The General Infirmary at Leeds,
Great George Street,
Leeds, LS1 3EX, UK

Visiting Professor and Associate,
Leeds Metropolitan University,
Law School, UK

* Tel.: +44 1132 432799; fax: +44 1132 861 177.
E-mail address: paul.marks@leedsth.nhs.uk

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Budowle Bruce, Schutzer Steven E, Breeze Roger G, Keim Paul S, Moore Stephen A. (Eds.), Microbial Forensics second ed. Academic Press. ISBN 978-0-12382006-8

This fascinating book uses examples ranging from the abortive Kameido incident in Japan in 1993 when the Aum Shinrikyo cult failed to induce any illness after releasing *Bacillus Anthracis* spores to the ground breaking Amerithrax case in October 2001 in the USA. Though lacking the technology today it provides a good example of what could be achieved in the emerging field of microbial forensics.

The bad management of the Kameido incident in 1993 serves to highlight a number of essential concepts in microbial forensics. Implementing the concepts is a high priority for law enforcement and public health agencies if they are to be successful in identifying the agent, and completing the chain of evidence to lead to a successful prosecution. Modern technology such as next generation sequencing with a > 150 gigabase throughput is enhancing the field enabling more rapid identification of microbiological agents, their relative virulence and their source.

It also goes into detail about the techniques used to identify the agents such as electron beam characterisation, mass spectrometry for proteomic analysis and comparative genomics.

The chapter on Collection and Preservation of Microbial Forensic Samples highlights the need for good training and interagency cooperation. The principles are no different from the collection and preservation of any samples from crime scenes but the specifics particularly in the preservation and storage of microbial samples are.

The book does not just deal with the criminal element but also looks at food-borne illnesses resulting from poor hygiene which can be caused by over 250 microbiological, physical and chemical agents. Of course such microbial toxins can and have been used deliberately.

Microbial forensics is evolving rapidly and has many applications such as its use in criminal investigations, providing intelligence information in the role of biodefence, and helping to control disease outbreak by identifying the agent and its source. It is a multidisciplinary field which includes biology, microbiology, virology, chemistry, physics, medicine, and computer science.

This book gives a comprehensive overview of the field of Microbial Forensics. It is well written by the various authors and well referenced throughout.

It will be of great value to epidemiologists, microbiologists, virologists, and police or law enforcement agents investigating disease outbreaks caused deliberately as an act of terror. It is also of benefit for scientists and medical practitioners with an interest in emerging pathogens and would serve as a good teaching guide.

Dr. Felicity Nicholson, BSc, MBBS, Dip FMS, FMFFLM, FRCpath

E-mail address: felicitynicholson2@googlemail.com

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